R E P O R T R E S U M E S

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THE ESTABLISHMENT OF A STATE OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT.

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THE OVERALL OBJECTIVES OF THE IDAHO OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT INCLUDED CONDUCTING OCCUPATIONAL RESEARCH, COORDINATING ACTIVITIES AMONG VARIOUS AGENCIES, AND PROVIDING RESEARCH CONSULTING SERVICES. SPECIFIC ACCOMPLISHMENTS OF THE UNIT SINCE THE BEGINNING OF ITS OPERATION IN JUNE 1965 WERE--(1) THE IDENTIFICATION OF ISSUES AND PROBLEMS RELATING TO THE VOCATIONAL EDUCATION PROGRAM, (2) THE TRANSLATION OF RESEARCH FINDINGS INTO CURRICULUM ADVICE FOR SCHOOLS IN THE STATE, (3) THE TRAINING OF OCCUPATIONAL RESEARCHERS, AND (4) SURVEYS TO DETERMINE THE EDUCATIONAL NEEDS RELATED TO VARIOUS OCCUPATIONS, AS WELL AS AVAILABLE LITERATURE ON THESE OCCUPATIONS. THE FUTURE PLANS FOR THE UNIT INCLUDED--(1) A GREATER EMPHASIS ON THE COORDINATION OF RESEARCH ACTIVITIES RATHER THAN DIRECT PARTICIPATION, (2) A CRITICAL EVALUATION OF THE UNIT'S COMPLETED RESEARCH EFFORTS, (3) A GREATER CONTRIBUTING ROLE TO THE COLLEGE OF EDUCATION AT THE UNIVERSITY OF IDAHO, AND (4) AN EMPHASIS ON RESEARCH PROJECTS WHICH HAVE A THEORETICAL BASIS AND/OR, WHICH WILL YIELD RESULTS HAVING UTILITY BEYOND A SPECIFIC SITUATION OR LOCALE. THE AUTHOR CONCLUDED THAT THE UNIT WAS ABLE TO OFFER IMPORTANT SUGGESTIONS FOR CHANGES IN AND ADDITIONS TO THE VOCATIONAL-TECHNICAL PROGRAM. (FM)

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FINAL REPORT
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March 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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Project No. OE-5-0102
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College of Education
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INTRODUCTION

The enabling legislation for the Idaho Occupational Research and Development Coordinating Unit--officially named the State Occupational Research Unit--was Section 4(c) of the Vocational Education Act of 1963 (PL 88-210, 88th Congress). Similar Units were established in some 24 states by the end of 1965 as part of a plan by the U.S. Office of Education to implement this section of the Act. During 1966, the number of Research Coordinating Units increased an additional 20, so that 44 of the 50 states had a functioning Unit by the end of the year.

The State Occupational Research Unit in Idaho began officially on June 1, 1965 as the result of a grant of $97,710 from the U.S. Office of Education. This amount was supplemented by an additional $13,966 in local funds for a total of $111,676. The original contract was due to expire November 30, 1966, thus covering the first 18 months of the Unit's operation. A proposal for a new grant for an additional 19 months beyond November 30, 1966 was submitted in June, 1966 to the U.S. Office of Education. This proposal resulted in a new contract, received in December, 1966 for $91,424 in Federal funds and $38,180 in local funds, for a total of $129,604.

Since the State Occupational Research Unit operated for several months without a full complement of personnel, and was not able immediately to initiate research activities, a large amount of funds remained unexpended as the original contract period drew to a close. Consequently, a request was submitted to the U.S. Office of Education for an extension of three months. This request was granted in December, 1966, thus moving the termination date of the original contract to February 28, 1967. The termination date of the new contract period also was moved forward from June 30, 1968 to September 30, 1968. The remainder of this report covers events and activities of the Unit's first 21 months, and presents certain broad guidelines for the Unit's operation for the next 19 months.

Problem

The major problem faced by the State Occupational Research Unit is epitomized in the declaration of purpose of the Vocational Education Act of 1963 (Section 1):

> It is the purpose of this part to authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the State--those in high school, those who have completed or discontinued their formal education and are

preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps--will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

Specific emphasis was placed on the statement that the vocational training or retraining provided under the Act should be realistic in the light of actual or anticipated opportunities for gainful employment.

Purposes and Objectives

The State Occupational Research Unit, since its inception, has been a joint effort between the College of Education, University of Idaho, and the Idaho State Board for Vocational Education. Close liaison with the latter agency has been maintained. Several conferences between Unit and State Board personnel were held during the contract period, and one research project was completed in cooperation with the State Board and other agencies (see item k, page 12). The Idaho State Board for Vocational Education has meanwhile carried out its normal functions and responsibilities regarding the total program of vocational-technical education in Idaho.

The purposes and objectives of the State Occupational Research Unit were broadly conceived as follows:

a. Conduct occupational research.

b. Coordinate research by other agencies, organizations, and individuals.

c. Stimulate new research.

d. Provide research consulting services.

Several more specific purposes and objectives may be stated in truncated form. Following each statement will be a brief account of the accomplishments of the Unit during its first 21 months of existence. Some of this material logically should be placed in the section entitled "Results" which comes later in the report. Since this would necessitate, for ease of reading and interpretation, a repeat listing of the purposes and objectives, it seemed most appropriate to include the additional material here together with appropriate references to the later section on "Results."

a. Perform a clearing house function. The first project of any consequence in the Unit was a survey and evaluation of published studies and literature relating to the vocational area in Idaho. A monthly bulletin

was initiated in October, 1965 and was continued the remainder of the contract period. The November, 1965 bulletin contained an annotated bibliography of materials obtained in the aforementioned survey (see item a, page 10). Subsequent issues of the bulletin contained references to newly published studies and reference materials which had potential value for vocational education. More recently the Unit has made plans to utilize the resources of the emerging ERIC system at The Ohio State University, Columbus, Ohio.

b. Provide training for occupational researchers. Three half-time graduate assistants were assigned to the Unit during the 1965-66 school term as Research Fellows. Currently another three graduate assistants are serving in similar positions for the 1966-67 term. All of these persons were, or are, graduate students in the College of Education working toward advanced degrees. The Research Fellows have been given training and research experience congruent with the purposes, objectives and activities of the Unit. It has not seemed appropriate to date to organize a special seminar or workshop for vocational research personnel throughout the state. The latter may prove feasible at some future date.

c. Conduct surveys of available literature relating to the vocational area. The comments following "a" above are applicable here. The survey and evaluation of available literature in Idaho also provided some basis for the broader purposes and objectives of coordinating vocational research and stimulating new research.

d. Identify issues and problems relating to the vocational education program. Many issues and problems were implicit in the purposes and objectives, and in the research projects completed or engaged in by the Unit. Others were identified by vocational educators and those less closely associated with the vocational education program in Idaho. The Unit has placed less emphasis on those problems and issues regarding which there are considerable differences of opinion and which do not lend themselves to relatively clear-cut and workable research designs.

e. Maintain a file of research publications. The comments following "a" above have implications for this objective. A file has been maintained of the materials collected during the aforementioned survey. Other pertinent literature has been ordered from time to time from a variety of sources. Publications of Research Coordinating Units in other states, and materials received from the U.S. Office of Education have further expanded the research publications file.

f. Determine individual and community vocational education needs. Progress has been made toward this objective in several research projects conducted and coordinated by the Unit. It is obvious, however, that all of the research efforts combined have just "scratched the surface," and that the research task is much larger than can be accomplished with the staff and facilities heretofore available in Idaho.

g. Assess the total supply and demand for labor. The comments following "f" immediately above cover this objective.

h. Identify occupational trends. Most of the work in trend analysis has been focused on industries rather than occupations (see item e, page 11). Research completed by the Unit and other agencies has tended to focus on occupational changes, needs, etc. at fairly specific points in time. Efforts to expand research studies relating to specific occupations have been hampered by difficulties encountered in obtaining complete and reliable data regarding occupations which compose the Idaho labor force.

i. Study labor mobility and factors relating to mobility. Mobility studies are rather difficult, for obvious reasons. The Unit has not undertaken studies with mobility as the prime focus. Some data on student and worker mobility were obtained, or will be obtained, in a study of the lumber industry in Idaho (see item b, page 10), and in follow-up studies of students in several Idaho schools (see items j and m, pages 12 and 13, respectively).

j. Assess the adequacy of educational requirements as related to job requirements. The Unit has not directly engaged in curriculum studies. This was based on the assumption that curriculum and subject-matter specialists were better qualified to do this work. Several Unit studies (see items b, g, i, j, and m, pages 10-13) have been concerned with the adequacy of educational requirements, and evaluations by former students of their school experiences.

k. Study the human characteristics demanded by today's occupations, and project these demands into the future. Four studies conducted by the Unit (see items b, d, l, and n, pages 10-13) have been concerned more or less directly with human characteristics as they relate to occupational performance or membership.

l. Study the full utilization of manpower, including the socioeconomically handicapped, and factors relating thereto. One small study was conducted relating to the training and employment of mentally and physically handicapped persons (see item h, page 12). Otherwise relatively little effort has been directed toward this objective.

m. Translate research findings into curriculum advice for schools in the state. The statements following "j" above are appropriate here.

n. Provide a model for follow-up studies of vocational trainees. Two follow-up studies (see items j and m, pages 12 and 13, respectively) are in progress as of the date of this report.

o. Provide information sources and psychological data for vocational guidance. Four studies particularly (see items b, d, l, and n, pages 10-13) have been designed with this objective in mind. All other

studies and research activities of the Unit have had implications for the guidance of students.

METHOD

The methodology for several research projects conducted by, or participated in, by the Unit has been detailed in separate publications. References to published reports, and a brief resume of each project, are presented in the next section--Results--of this report. The methods used to establish and maintain the Unit in a position of leadership in the Idaho vocational education program are described under the following headings.

Methods of Contact and Public Relations

The Unit staff consisted of three full-time persons, a director, assistant director, and secretary; and four half-time persons, a secretary and three graduate assistants. The latter three positions have been filled by graduate students in advanced degree programs within the College of Education. All staff members have been involved to a greater or lesser extent in the preparation of publicity materials and in individual or group contacts to promote the Unit's operation. Several examples of important activities engaged in by Unit staff members follow:

a. Radio and newspaper releases. The establishment and the continuation of the Unit have been announced through the public relations department of the University of Idaho, and thus have received radio and newspaper coverage in all major sections of the state. Several of the Unit's publications also have received radio and newspaper coverage through this same source. Local research activities of the Unit have from time to time been published in local newspapers throughout the state.

b. Individual contacts. Individuals too numerous to list separately have been contacted. The director of the Unit has lived in Idaho most of his life, and has lived and worked in all major areas of the state. Numerous individual acquaintances in a wide variety of organizations and agencies have been contacted by Unit members by phone, letters, and in personal visits.

c. Speeches to professional groups. The Idaho Association of Secondary School Principals, the Idaho Association of School Superintendents, service clubs, and other professional associations are examples of groups addressed by members of the Unit.

d. Group conferences. Conferences have been held several times with persons affiliated with a number of organizations, agencies, business firms, etc., such as those listed below under the next heading.

Several conferences were held to explore research efforts and the possibility of stimulating additional studies. Other meetings were held as part of an ongoing research effort, some of which directly involved the Unit as a partner in a joint research study, or as a consultant.

e. National or regional conferences. The director and assistant director of the Unit have attended several national and regional conferences during the 21-month period. A description of the conferences, in chronological order, follows:

--The initial planning meeting for RCU directors, held in the U.S. Office of Education, Washington, D.C., July, 1965.

--The Western States Regional Conference, held in Flagstaff, Arizona, November, 1965.

--National seminar on Development and Coordination of Research for RCU personnel at The Ohio State University, Columbus, Ohio, February, 1966.

--Research conference and workshop at Utah State University, Logan, Utah, June, 1966.

--National planning meeting for RCU personnel, held in the U.S. Office of Education, Washington, D.C., September, 1966.

--The 60th annual convention of the American Vocational Association, held in Denver, Colorado, December, 1966.

--The Western States Regional Conference, held in Phoenix, Arizona, December, 1966.

--Training conference on the Program Evaluation and Review Technique (PERT), at The Ohio State University, Columbus, Ohio, January, 1967.

f. Monthly bulletin. The Unit began the publication of a monthly bulletin during October, 1965 and has continued this to date. All school districts in the state, all post-high school institutions, and several additional organizations and individuals were sent the initial bulletin together with a return request if they wished to be placed on a permanent mailing list. The list has grown so that approximately 225 mailouts occur each month. This includes RCU's and other interested agencies and individuals in other states. The bulletin is the best single source of news concerning Unit publications and activities.

Agencies and Organizations Contacted

The following agencies and organizations were contacted, and to the extent possible a liaison was developed between them and the Unit:

a. Department of Employment, State of Idaho.
b. All major universities, colleges, and area vocational schools.
c. State and city Chambers of Commerce.
d. Numerous industrial organizations.
e. Idaho Department of Commerce and Development.
f. Idaho State Nurses' Association.
g. Idaho Retailer's Association.
h. Idaho Hospital Association.
i. Idaho Association of Licensed Nursing Homes.
j. Associated Industries of Idaho.
k. Several city and county governmental units.
l. The Idaho Psychological Association.
m. The Idaho Personnel and Guidance Association.
n. Several public high schools.
o. Vocational Rehabilitation Service.
p. Department of Public Health.
q. Department of Public Assistance.

The above list is illustrative rather than exhaustive, and other organizations noted elsewhere in this report are not repeated in the list.

Efforts to coordinate research activities have not been too difficult, because comparatively little research related to the vocational-technical area has been conducted throughout the state. Consequently, there have been few occasions when the Unit could provide consulting services for ongoing research projects. Efforts to stimulate new research likewise have not been too successful. Persons qualified to do research have consistently been engaged in full-time duties to the extent that little time could be found to conduct independent research studies.

The paucity of research studies and personnel time devoted to research efforts was recognized early in the Unit's operation. It was decided that the Unit should engage directly in several research projects rather than depend entirely upon others to do the work. It seems now, in retrospect, that this was the best procedure to follow. However, a limited staff and geographical locations and distances peculiar to Idaho have rendered the conduct of several important studies virtually impossible. Consequently, the studies completed to date are not necessarily representative of those which should receive top priority. The real need which continues to exist is for the employment of research personnel in different areas of the state whose <u>main interest</u>

and responsibility is research in the vocational-technical area. Little progress has been made in this respect to date.

Advisory Committees

A State Advisory Committee was formed soon after the Unit was organized. The original members and their titles and affiliations follow:

a. Addison C. Beeman, Chief of Research and Analysis, Department of Employment, Boise.

b. Thomas Bell, Superintendent, District 148, Grace; President, Idaho Association of School Superintendents.

c. Darrell H. Dorman, President, Idaho State AFL-CIO, Boise.

d. Del F. Engelking, Superintendent of Public Instruction, State Department of Education, Boise.

e. Sam R. Glenn, Director, Idaho State Board for Vocational Education, Boise.

f. William Hedley, Dean of Men, College of Idaho, Caldwell; President, Idaho Personnel and Guidance Association.

g. Frank Hirschi, Representative, Bear Lake County; Chairman, Education Committee, House of Representatives.

h. Elmo Parish, Office Manager, Blue Cross Insurance; Member, Administrative Management Society, Boise.

i. Ray W. Rigby, Senator, Madison County; Member, Senate Education Committee.

j. Harold A. Taylor, Director of Services for the Blind, Department of Public Assistance, Boise.

k. Dr. James L. Taylor, President, College of Southern Idaho, Twin Falls.

l. Stanley Trenhaile, Idaho Commissioner of Agriculture, Boise.

Thomas Bell (see item b above) left his job as superintendent and presently is a staff member within the College of Education, University of Idaho. Dr. Bell was replaced on the Advisory Committee by Mr. Earl Vopat, Superintendent of Grangeville Joint District 241 and currently President, Idaho Association of School Superintendents. Mr. Leon Scott, Personnel Manager of Lamb-Weston, Inc., American Falls (a potato processing firm) was invited to serve on the Advisory Committee beginning early this year, thus increasing the membership to a total of thirteen.

Due to schedule conflicts both on the part of the Committee members and staff members of the Unit, only two meetings were held during the 21-month period. The first meeting was held in late September, 1965 shortly after the Unit was organized. The Committee gave several

suggestions for research projects and activities, some of which the Unit was able to implement. At the second meeting, held late in February, 1967 the Committee voted to meet three times a year to give more continuity to the working relationship between it and the Unit. Furthermore, it was suggested that each meeting have some research project or area as a general theme or focus. Since the Unit has been engaged for nearly a year in a study of agriculturally-related occupations (see item g, page 11), this area of vocational education was selected as the theme for the next meeting scheduled for May 1, 1967. It seems that, during the new grant period, much closer and more profitable working relationships may be expected between the State Advisory Committee and the Unit.

A Unit Ad Hoc Committee was formed of staff members at the University of Idaho. The purpose of this Committee was to provide consulting services to the Unit and other research groups in the state, and to serve as a "sounding board" for proposed research projects and activities. The following persons have served on the Ad Hoc Committee:

a. Dr. Gladys I. Bellinger, Professor and Head, Home Economics Department.

b. Dr. William R. Biggam, Professor of Industrial Education.

c. Dr. Sydney Duncombe, Assistant Professor of Political Science and Associate Director of the Bureau of Public Affairs Research.

d. Mr. Kenneth A. Ertel, Assistant Professor of Education and Teacher Educator for Distributive Education.

e. Dr. Edward L. Kelly, Associate Professor of Education and Director, Bureau of Educational Research.

f. Dr. Robert M. Kessel, Professor of Education and Head, Department of Office Administration.

g. Dr. Oscar Kjos, Assistant Professor of Psychology and State Vocational Counselor Educator.

h. Dr. Victor E. Montgomery, Professor and Head, Department of Psychology.

i. Dr. Norman Nybroten, Professor of Economics and Associate Director of the Bureau of Business and Economic Research.

j. Dr. Everett V. Samuelson, Dean of the College of Education.

k. Mr. Herbert A. Winner, Professor and Head, Department of Agricultural Education.

Several meetings were held with this Committee, during which the activities and problems of the Unit were discussed. Several Committee members provided consulting services for various research projects conducted by the Unit, and their names are acknowledged in several of the research reports which have been issued.

RESULTS

As already indicated, the Unit has engaged directly in research projects and activities, both singly and in cooperation with other organizations and agencies. The research program of the Unit is presented under the first heading to follow. Research activities of note by other agencies and organizations are presented under the next heading.

Unit Research Projects and Activities

The Unit has issued nine research publications which are listed as references at the end of this report. Those projects for which reports are available will have the reference number following the title. Others still in progress will be so identified. The projects are listed generally in the chronological order of their initiation.

a. Annotated Bibliography of Idaho Publications (Reference 8). This study was published as an annotated bibliography with the second issue of the monthly bulletin. Publications concerned with the Idaho economy, labor force, individual occupations, various industries, the educational system, labor legislation, and other related topics were listed.

b. A Study of the Lumber Industry in Idaho (References 2, 3, and 4). The lumbering study was published in three parts. Part I deals with the importance and general characteristics of the industry in the United States, in several western states, and in Idaho. Excerpts from several published reports are presented which describe present conditions in the industry, and give projections beyond the year 2000. Part II was divided into two major sections. The first section presents certain sociological and related data for lumber workers. These data pertain to several aspects of lumbering, such as prestige level, salary information, geographical location of employment, and physical requirements of the work. The second section presents a survey of studies from the psychological literature involving workers in the industry. Also included are the results of a psychological test development study in a large combined lumber and paper mill located in North Central Idaho. Part III presents the results of research in 27 mills in the Idaho lumber industry. Interview results with 131 foremen and questionnaire results for 1,192 production workers are presented and discussed. Also, results obtained from 150 mail questionnaires are included. Certain personal characteristics of lumber workers are presented, and educational experiences desirable for this industry are identified and discussed.

c. Vital Statistical Trends and Population Projections for Idaho, 1950-1975 (in progress). The study design calls for an analysis of the state's population growth in the recent past, and a projection of this growth into the future. Important factors which will be considered are

birth rate, death rate, and net migration. The final report should contain three population projections--high, medium, and low--thus providing a range of figures rather than a single projection. One graduate assistant of the Unit participated in this study, which was initiated by the Chairman of the Department of Sociology at the University of Idaho.

d. A Survey of Literature Related to Selected Nonprofessional Occupations (Reference 7). A survey of the psychological literature was completed for studies relating to success and/or membership in 28 occupations for which training is given in Idaho high schools and area vocational schools. The report concludes with a section which draws together the data presented and in which are suggested several types of tests which should be used for experimental validation studies in Idaho schools. The importance of local test validation studies is stressed and documented.

e. Employment Trends in Various Idaho Industries 1950-1964 (Reference 9). This study was conducted in cooperation with the Department of Employment, State of Idaho, and the Idaho Department of Commerce and Development. A total of 77 graphs was prepared showing industrial employment trends over the 15-year period. The final report presented only the main highlights of the study. A brief narrative accompanied a general description of several industries embracing one or more two-digit code groups of the Standard Industrial Classification Manual. Industries showing rapid growth, normal expansion, and a decline in employment were identified and categorized.

f. A Study of the Nursing Profession in Idaho Medical Facilities (Reference 5). The nursing study was a cooperative effort between the Idaho State Nurses' Association, the Idaho Hospital Association, the Idaho Association of Licensed Nursing Homes, and the Unit. An introductory section of the report briefly touches on recent issues in the nursing profession, such as wages and working conditions. The main body of the report presents the results obtained on a 42-item questionnaire mailed to all medical facilities in Idaho. Several appendixes containing additional data are included in the report.

g. A Study of Agriculturally-Related Occupations in Idaho (in progress). This study has been in progress for about one year as of this date. The basic data were gathered during the summer of 1966 by two Unit staff members and two consultants hired specifically for field research. Field interviews were held with several hundred firms which (a) produced one or more products which found immediate use on the farm, (b) processed food or other products produced on the farm, or (c) provided some service which directly benefited the farm community. An important feature of the study design was the use of psychologically trained interviewers rather than persons with an agricultural background. Data obtained during the field interviews are being analyzed, and further interviews and analyses may be completed to expand

the study.

h. A Study of Vocational Training for Mentally and Physically Handicapped (Reference 6). This report presents the overall problem of training mentally and physically handicapped persons to participate in the labor force. Estimates are given regarding the magnitude of the problem in Idaho. The difficulties encountered in defining these groups of persons is discussed. The main body of the report consists of a listing of various organizations and agencies, together with a description of services rendered to mentally and physically handicapped persons. Recommendations are given for general improvements in the programs of training available in Idaho.

i. A Study of Employment Opportunities for Chemical Technologists in Northern Idaho (Reference 1). The study had two major purposes: (1) to identify training needs for chemical technologists per se, and (2) to provide a model which might be followed in future studies relating to vocational training programs. Each major phase of the study is described, together with the results obtained. A sufficient number of potential openings was found to justify a training program for this occupation in one of the Idaho area vocational schools.

j. A Follow-up Study of Vocational School Students (in progress). This study, which is nearing completion, was designed to follow up both graduates and dropouts in a number of vocational programs at North Idaho Junior College, Coeur d'Alene. A follow-up questionnaire was constructed specifically for the study in cooperation with staff members of the College. The study should provide information of use in future educational planning, and also should serve as a model for similar studies elsewhere in the state.

k. A Feasibility Study for an Area Vocational School (unpublished). This study was a cooperative effort between local Chambers of Commerce; the Department of Employment, State of Idaho; the Idaho State Board for Vocational Education; and the Unit. Two major types of data were obtained. First, employment potential and job shortage areas were determined by the Department of Employment through analyses of newspaper ads for workers, analyses of job orders in local employment offices, and through a study of questionnaire results obtained in an earlier county occupational survey. The Unit prepared and administered a student interest questionnaire to several hundred local high school students, and the Idaho State Board for Vocational Education tallied the results. The final results of the study were used for local educational planning and were not published as a general research report.

l. Development of a Test Battery for Vocational Guidance, Selection, and Placement (in progress). The survey of psychological literature related to success and/or membership in 28 occupations (see item d on the preceding page) was followed by a number of exploratory activities

regarding the development of a comprehensive vocational testing program in Idaho. A small beginning was made about midway through 1966 when two area vocational schools cooperated with the Unit in compiling psychological test scores, academic grades, and other personal data on several hundred present and former students. As of this date, the data are being analyzed for any significant relationships which may be useful in guidance, selection, and placement. The study described below under "n" also should yield results which will have potential value for those persons working with vocational and pre-vocational students.

m. A Follow-up Study of High School Graduates (in progress). Follow-up studies were listed as one objective in the original proposal which resulted in the formation of the Unit. As noted above (see item j on the preceding page), one follow-up study of area vocational school students is underway. The continuation proposal, submitted to the U.S. Office of Education in June, 1966 requested funds for a sub-contract study for follow-up of graduates of the Pocatello and Idaho Falls high schools of southeastern Idaho. The Unit received permission to begin this study prior to the end of the original contract, and accordingly the study began October 1, 1966. A questionnaire was developed and mailed to 5,844 former students who had graduated sometime during the 10-year period 1954-1963. Data from school records, such as grade point averages and type of educational program, will be obtained for later analyses. The results should prove useful in local educational planning, and the study should serve as a model for other similar projects which may be completed elsewhere in the state.

n. A Career Choice and Development Study (in progress). This study involves the administration of psychological instruments designed to assess interest and personality variables for a number of vocational-technical students in Idaho area vocational schools. The final number tested may approach five hundred students. The study design has two major objectives. First, it involves the investigation of possible means of differentiating various vocational-technical student groups from each other, and from student groups oriented toward four-year college programs. Second, the several personality and interest measures will be related to John L. Holland's theory of vocational choice, set forth in his book entitled The Psychology of Vocational Choice (Waltham, Mass.: Blaisdell Publishing Co., 1966). The results will have potential value for career guidance and counseling.

Research by Other Organizations and Agencies

Several organizations and agencies have completed studies concerned with the Idaho economy and educational program. Some studies have been designed specifically to determine vocational training needs, whereas others with a different main emphasis have had important implications for the vocational area. Many studies are not written up in report form, or, if a report is written, it is not given wide distribution. Thus, more research effort has been expended than is readily

apparent from a survey of available publications. It seems appropriate, therefore, to mention a few of the more salient examples of such research activities.

The Department of Employment, State of Idaho, was active in occupational research for several years prior to the formation of the Unit. County occupational surveys, wage and hour surveys, and the preparation of occupational guides for single occupations are examples of publications which have been issued by the Department for several years. More recently, the Manpower Development and Training Act gave the Department of Employment the responsibility of determining training needs for programs to retrain or upgrade workers in various skills. This new responsibility, plus additional funds to hire more research personnel, have resulted in studies of greater depth regarding labor force characteristics. Examples of recent studies which were concerned with training and placement needs are: "A Survey of Demand in Selected Metal Working Occupations for Major Areas of Idaho;" "Occupations in North Central Idaho, Trends and Outlook;" and "A Survey of Job Openings in the Idaho Falls Local Office." The publications have not been widely distributed because, due to certain technical and exploratory features, it seemed most appropriate to restrict their distribution to professional educators and other similarly qualified persons.

The Idaho Department of Commerce and Development has engaged in many activities over the years to promote the economic and industrial growth of the state. Recently a consulting firm was employed to study the state's economic structure and recommend different types of industries which might be attracted to Idaho. As of this date, the study is about half finished, and negotiations are underway to obtain funds for the continuation and eventual completion of the project. The Department recently issued a publication entitled "Idaho Industrial Opportunity," which covers 44 subjects in 12 categories of the state's economic life. The contents have potential value as a guide to more intensive studies of the labor force.

The University of Idaho, through its several colleges and departments, has produced a wealth of research publications over the years. Two examples may be cited which have implications for research in the vocational-technical area. An "Idaho Statistical Abstract," published by the Bureau of Business and Economic Research, College of Business Administration, contains statistics on population, education, vital statistics, income, employment, and many other subject areas. A publication entitled "Idaho Will Grow" traces the history of the state's major industries and predicts their futures. These and other publications provide useful bases for more intensive research oriented toward the needs of vocational educators. A publication directly related to the needs of distributive education was published recently, entitled "Identification of Major Tasks Performed by Merchandising Employees Working in Three Standard Industrial Classifications of Retail Establishments." The report was based on the work of a staff

member within the College of Education who was assigned part-time during the 1965-66 school year to the Research and Development Unit, Washington State University, Pullman, Washington. This same staff member is currently continuing and expanding this study in distributive education under a new grant to the University of Idaho.

Several public schools within the state have completed studies of labor market conditions in relation to their own vocational programs. Many high school programs in agriculture, home economics, trades and industries, and distribution have been adjusted to meet changing conditions in the community. Recently a notable expansion has occurred in office occupations offerings; the number of programs more than doubled from 19 to 47 during a recent two-year period. The area vocational schools, five in number, have conducted a significant amount of research as part of their ongoing educational programs. Advisory committees are used extensively to develop and up-date the program offerings--both for enrolled students and those in adult education programs. Two of the five area schools began operations during the last two years, and fairly extensive industrial surveys were completed prior to the establishment of their programs. The remaining schools have explored, and initiated, new programs requiring studies of employment requirements and opportunities for a variety of occupations. The results of such studies are recorded, and frequently find their way into reports submitted to the Idaho State Board for Vocational Education, but it has not been common practice to issue the results for general distribution.

The Idaho State Board for Vocational Education is responsible for the total program of vocational education in the state. The State Board, in addition to several administrative, executive, and supervisory duties, also engages in studies which are oriented toward conditions prevailing in the world of work. Recent examples are the formation of advisory committees for city fireman training, peace officer training, and exploratory studies relating to training programs for farm equipment mechanics. Training programs have been initiated and currently are underway for all three of these occupations.

DISCUSSION

The activities and accomplishments of the State Occupational Research Unit during the first 21 months of its existence have been reviewed. It is evident that some progress has been made toward all of the purposes and objectives stated in the original proposal which was funded by the U.S. Office of Education. This period of 21 months was, however, mainly a period of establishment and exploration. No one was certain at the outset what role the Unit should play and what might be accomplished in the research field. On the other hand, the purposes and objectives stated in the original proposal have proven to

be useful guides, and will serve a similar function as the Unit enters the new grant period of 19 months. Thus, no major changes are foreseen for the Unit. A few changes in emphasis do seem in order, however, and four of the most salient of these changes are presented and discussed in the remaining paragraphs of this section.

The first change in emphasis which may be expected is that the Unit will tend to reverse the earlier policy of engaging directly in research activities. As stated earlier, this seemed appropriate and necessary when the Unit was first organized. For the future, it seems that more emphasis should be placed on the major objectives of coordinating research, stimulating new research, and providing consulting services. It is obvious that the Unit can conduct only a small fraction of the research studies needed. The only apparent solution, therefore, is to involve other research personnel in the state to the maximum extent possible. The Unit will continue to conduct research, as ongoing projects are necessary to train vocational researchers and graduate assistants who may be assigned to the Unit. Extensive field surveys and similar projects which are removed geographically from the University of Idaho will be curtailed and eventually eliminated.

The second change in emphasis will be an attempt to bring about a critical evaluation of research efforts which have been underway in recent months. The main issue seems to be whether some of the research efforts detailed earlier in this report can be judged adequate, or if the vocational-technical program in Idaho requires an increase in this area. As noted earlier in this report, the Unit has had relatively little success in stimulating new research activities, and also little success in obtaining employment for qualified persons who would be assigned to vocational-technical research as their primary responsibility. The Unit staff believes that far more research emphasis is needed, and that the only way to realize an increase in research efforts is to employ the necessary research personnel. Vocational program offerings have been increased in the state in recent months, thus requiring the employment of additional instructional personnel. It may be more appropriate in the future to use available funds to hire research directors before further expansions are made in program offerings.

A third change, already in progress, is concerned with the Unit's role in the ongoing program of the College of Education at the University of Idaho. The Unit, if it is to continue within the College of Education, should relate and contribute to the College's major programs of research and teacher education. The entire program of the Unit should be enhanced if some graduate students within the College of Education undertake thesis research projects in the vocational-technical area. The need for research personnel noted in the preceding paragraph perhaps can be met most effectively by encouraging certain able students to do research in this area of education which can be continued and expanded after their formal education is complete.

Accordingly, graduate students assigned to the Unit as Research Fellows will be given the opportunity to use at least part of their work commitment for their own thesis research, provided that the project is congruent with the Unit's purposes and objectives. Data obtained in Unit research studies also may be made available to other graduate students who wish to use the data for thesis research. Currently, three staff members of the Unit are exploring the possibility of designing thesis projects within the Unit's overall research program. None are developed sufficiently as of this date to make possible a meaningful description in this report.

The fourth change, related to the third change discussed immediately above, pertains to the theoretical orientation of the research program of the Unit. Several studies conducted by the Unit have been surveys, with little if any relationship to a theory or to theoretical concepts. Some of these studies have been "bread and butter" types, oriented toward answering specific questions related to local educational needs. Such studies are appropriate and necessary, but they frequently do not yield useful knowledge which can be generalized beyond a specific local situation. Therefore, the Unit will tend to emphasize research projects which have a theoretical basis and/or which will yield results having utility beyond the specific situation or locale in which the project was completed. A good example of this type of research is the career choice and development study (see item n, page 13) recently begun by the Unit. This change in emphasis, plus the three changes already discussed, seem appropriate to the continued professional development of the Unit, and should make it more effective as the Occupational Research and Development Coordinating Unit for the State of Idaho.

CONCLUSIONS

A State Occupational Research and Development Coordinating Unit has been established in Idaho at the University of Idaho. During its first 21 months, the Unit has made progress toward all of the purposes and objectives stated in the original proposal to the U.S. Office of Education. A large amount of research methodology has been developed and implemented in several studies. Many research projects conducted by the Unit and by other agencies and organizations have pointed the way to important changes in, and additions to, the vocational-technical program. The Unit has received recognition throughout the state and beyond, and is ready at this time to move into the new grant period with even greater contributions to the ongoing program of vocational-technical education in Idaho.

SUMMARY

The Idaho Occupational Research and Development Coordinating Unit was established officially on June 1, 1965, and the original contract, scheduled to expire November 30, 1966, was extended through February 28, 1967. During this 21-month period, the Unit was guided by the following major purposes and objectives: (a) conduct occupational research, (b) coordinate research by other agencies and organizations, (c) stimulate new research, and (d) provide consulting services. Numerous methods of contact were used to acquaint other persons in the state with the Unit's program, purposes, and objectives. A number of research studies were completed by the Unit, either singly or in cooperation with other state agencies and organizations. A shortage of research manpower was noted as a major and continuing problem. The organization and establishment of the Unit are complete, and its continuation during the new grant period of 19 months seems both justified and necessary for the program of vocational-technical education in Idaho.

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